

Applicant: Yu-Lien Huang, et al.
Serial No.: 10/656,586
Attorney Docket No.: 67,200-1133

REMARKS

Claims 1-20 are pending herein.

Claims 9-20 are withdrawn from consideration.

Claims 1-8 are rejected.

Claim 1 is currently amended.

Drawings

The drawings were objected to because the confinement ring in Figures 2 and 4 is drawn with dashed lines indicating a hidden part. It was stated that the dashed line should be solid to indicate a cross section. Corrected drawing sheets in compliance with 37 CFR 1.121(d) were required in reply to the Office action to avoid abandonment of the application.

Accordingly, corrected drawing sheets in compliance with 37 CFR 1.121 (d) are submitted with the present response. In the corrected drawing sheets, the confinement ring in each of Figures 2 and 4 is drawn with solid lines rather than dashed lines. Reconsideration and withdrawal of the objection to the drawings is therefore respectfully solicited.

Claim rejections under 35 U.S.C 103

Claims 1-8 were rejected under 35 U.S.C. 103(a) as being unpatentable over Lilleland et al (U.S. Pat. No. 6,073,577) in view of Ohta (U.S. Pat. No. 4,526,132).

It is respectfully submitted that Lilleland et al in view of Ohta fails to render claims 1-8 obvious under 35 U.S.C. 103(a) on the grounds that Lilleland et al in view of Ohta fails

Applicant: Yu-Lien Huang, et al.
Serial No.: 10/656,586
Attorney Docket No.: 67,200-1133

to teach or suggest an apparatus comprising "a process chamber having a *substantially vertical* chamber wall defining a chamber interior; a showerhead...having a lateral surface engaging said chamber wall; and a plurality of exterior fasteners extending laterally through said chamber wall and into said showerhead, with *said plurality of exterior fasteners structurally isolated from said chamber interior*", as set forth in amended claim 1, and therefore, defined by claims 2-4 as dependent therefrom.

On page 3 of the Office action, it was stated, "The motivation for replacing the vertical screws of Lilleland et al with the lateral screws of Ohta et al is to provide an alternate and equivalent means of mounting the showerhead of Lilleland et al".

However, it is respectfully submitted that in the Lilleland et al apparatus, the horizontal orientation of the chamber wall (top wall or uppermost layer of figure 1 which seals channel 13) and the horizontal orientation of the underlying showerhead (14) would prevent the use of lateral fasteners to attach the showerhead (14) to the chamber wall.

Therefore, it is respectfully submitted that there is no teaching, suggestion or motivation for a person of ordinary skill in the art to replace the vertical fastener technique as taught by Lilleland et al with the horizontal fastening technique taught by Ohta to facilitate attachment of the showerhead to the chamber wall of the Lilleland et al apparatus.

Accordingly, it is respectfully submitted that Lilleland et al in view of Ohta fails to teach or suggest all of the

Applicant: Yu-Lien Huang, et al.
Serial No.: 10/656,586
Attorney Docket No.: 67,200-1133

limitations set forth in amended claim 1, and therefore, defined by claims 2-8 as dependent from amended claim 1.

Thus, it is respectfully submitted that Lilleland et al in view of Ohta fails to render claims 1-8 obvious under 35 U.S.C. 103(a). Reconsideration and allowance of claims 1-8 is therefore respectfully solicited.

Claims 1 and 2 were rejected under 35 U.S.C. 103(a) as being unpatentable over Masuda et al (U.S. 2002/0000197) in view of Ohta (U.S. Pat. No. 4,526,132).

It is respectfully submitted that Masuda et al in view of Ohta fails to render claims 1 and 2 obvious under 35 U.S.C. 103(a) since Masuda et al in view of Ohta fails to disclose an apparatus comprising "a process chamber having a substantially vertical chamber wall...a showerhead provided in said process chamber...a plurality of exterior fasteners extending laterally through said chamber wall and into said showerhead, with said plurality of exterior fasteners structurally isolated from [a] chamber interior", as set forth in amended claim 1, and therefore, defined by claim 2 as dependent therefrom.

On page 4 of the Office action, it was stated, "The motivation for attaching the showerhead of Masuda et al with the lateral screws of Ohta et al, through the chamber wall into the showerhead, is to provide means of mounting the showerhead of Masuda et al as required by Masuda et al but not described".

However, it is respectfully submitted that Masuda et al and Ohta, taken alone or in combination with each other, fails to

Applicant: Yu-Lien Huang, et al.
Serial No.: 10/656,586
Attorney Docket No.: 67,200-1133

describe any advantage which would be realized by adapting the horizontal fastener technique of Ohta to attach the showerhead (12) to the process chamber (16) of Masuda et al in such a manner that the fasteners are "structurally isolated" from the interior of the Masuda et al. process chamber, as set forth in amended claim 1.

Accordingly, while it is possible to adapt the horizontal fastener technique of Ohta to facilitate attachment of the showerhead to the process chamber of Masuda et al., neither reference suggests any desirability of such a combination [MPEP 2143.01 (III)].

Accordingly, it is respectfully submitted that Masuda et al in view of Ohta fails to teach or suggest all of the limitations of amended claim 1 and claim 2 as dependent from amended claim 1.

Thus, it is respectfully submitted that Masuda et al in view of Ohta fails to render claims 1 and 2 obvious under 35 U.S.C. 103(a). Reconsideration and allowance of claims 1 and 2 is therefore respectfully solicited.

Claims 3-8 were rejected under 35 U.S.C. 103(a) as being unpatentable over Masuda et al (2002/0000197) and Ohta, as applied to claims 1 and 2 above, and further in view of Lilleland et al (U.S. Pat. No. 6,073,577).

As was set forth herein above, Masuda et al and Ohta, taken alone or in combination with each other, fails to teach or suggest all of the limitations of amended claim 1; therefore,

Applicant: Yu-Lien Huang, et al.
Serial No.: 10/656,586
Attorney Docket No.: 67,200-1133

Masuda et al and Ohta fail to teach or suggest all of the limitations of claims 3-8 as dependent from amended claim 1.

It is further respectfully submitted that Lilleland et al fails to indicate any advantage which would be realized by adapting the horizontal fastener technique of Ohta to attach a showerhead to the process chamber of either the Masuda et al or Lilleland et al apparatus.

Therefore, Lilleland et al would fail to provide any teaching, suggestion or motivation to a person of ordinary skill in the art to use lateral fasteners to attach a showerhead to a process chamber wall such that the fasteners are "structurally isolated" from the interior of the process chamber, as set forth in amended claim 1 and defined by claims 3-8 as dependent from amended claim 1.

Accordingly, it is respectfully submitted that Masuda et al and Ohta and further in view of Lilleland et al fails to teach or suggest all of the limitations of claims 3-8 as dependent from amended claim 1.

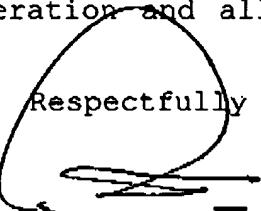
Thus, it is respectfully submitted that Masuda et al and Ohta in view of Lilleland et al fails to render claims 3-8 obvious under 35 U.S.C. 103(a). Reconsideration and allowance of claims 3-8 is therefore respectfully solicited.

Applicant: Yu-Lien Huang, et al.
Serial No.: 10/656,586
Attorney Docket No.: 67,200-1133

Conclusion

Every effort has been made to amend applicant's claims in order to define his invention in the scope to which it is entitled. Accordingly, reconsideration and allowance of claims 1-8 is respectfully solicited.

Respectfully submitted,


Randy W. Tung
Reg. No. 31,311